

CLAIMS

1. A moisture absorbent material with an indicator function, characterized in that the material comprises:
a resin layer containing 5 to 80% zeolite by weight;

5 and

a printed layer including a character, shape, picture or the like and disposed on at least one side of said resin layer, so that said printed layer is made to visibly appear due to said resin layer becoming transparent by
10 moisture absorption.

2. The moisture absorbent material with an indicator function according to claim 1, characterized in that said printed layer is so formed that patterns constituted by characters, symbols, lines or the like have a difference in
15 the print density thereof.

3. The moisture absorbent material with an indicator function according to claim 1 or 2, characterized in that another resin layer containing 5 to 80% zeolite by weight is superposed on the side of said resin layer at which said
20 printed layer is disposed.

4. The moisture absorbent material with an indicator function according to any one of claims 1 to 3, characterized in that the material has a barrier film superposed on at least one surface thereof.

25 5. The moisture absorbent material with an indicator function according to claim 4, characterized in that an ink of one color selected from white, black, red, blue, green, yellow, indigo, cyan and magenta or an ink of mixed colors selected therefrom is applied between said barrier film and said
30 printed layer.

6. The moisture absorbent material with an indicator function according to any one of claims 1 to 4, characterized in that an ink of one color selected from white, black, red, blue, green, yellow, indigo, cyan and magenta or an ink of

mixed colors selected therefrom is applied to an opposite side of said resin layer which is provided with said printed layer.

7. The moisture absorbent material with an indicator function according to any one of claims 1 to 6, characterized in that said resin layer exhibits light transmittance of 70% or more when moisture absorption of said resin layer reaches a saturation state.

8. The moisture absorbent material with an indicator function according to any one of claims 1 to 7, characterized in that a film having a reflecting surface is superposed on at least one side of the moisture absorbent material.

9. The moisture absorbent material with an indicator function according to any one of claims 1 to 8, characterized in that an ink used for said printed layer has a weight ratio of pigment or dye to resin within a range of 0.05 to 50 wt%.

10. The moisture absorbent material with an indicator function according to one of claims 1, 2 and 9, characterized in that said printed layer has an ink film thickness of 0.3 to 100 μm .

11. The moisture absorbent material with an indicator function according to any one of claims 1 to 10, characterized in that the material is so constructed that a printed pattern appears when a difference in optical density values between a whitish turbid state and a transparent state of said resin layer is rendered 0.05 or more.

12. A humidity indicator characterized in that a film using a zeolite-containing resin composition, a polyolefin film having a pattern printed thereon, and a film having a reflecting surface are laminated on one another, so that said pattern is rendered visible by utilizing a change of said film using the zeolite-containing resin composition from a whitish turbid state to a transparent state due to moisture absorption.

13. The humidity indicator according to claim 12,

characterized in that a thermoplastic resin is superposed on said film using the zeolite-containing resin composition so as to regulate the rate of moisture absorption, to thereby control an increase rate of visibility of the pattern.

5 14. The humidity indicator according to claim 13, characterized in that a paint for enlarging an angle of visibility is applied to a surface of said thermoplastic resin.

10 15. The humidity indicator according to any one of claims 12 to 14, characterized in that a film having a low refractive index is interposed between said polyolefin film having said pattern printed thereon and said film having said reflecting surface.

15 16. The humidity indicator according to claim 12, characterized in that a laminate constituted of said film using the zeolite-containing resin composition, said polyolefin film having said pattern printed thereon and said film having said reflecting surface is entirely interposed between films having a width larger than that of said film using the zeolite-containing resin composition and then
20 subjected to a heat lamination process.

 17. The humidity indicator according to claim 16, characterized in that said films used for the heat lamination have a water vapor transmission rate ranging from 0.1 to 100 g/m²/day.

25 18. The humidity indicator according to claim 16 or 17, characterized in that a color sample is printed on a film layer of said films used for the heat lamination so as to be able to judge a state of said pattern which appears with moisture absorption.

30 19. The humidity indicator according to claim 12, characterized in that said pattern is formed to have a difference in the print density of characters, symbols, lines or the like so that the degree of visibility may change, whereby the humidity of a space is clearly indicated.

20. A packaging bag characterized in that the bag is formed in a bag shape using a film provided on the whole of or on part of a face thereof with a zeolite-containing resin layer according to one of claims 1 to 19.